

IN THE CLAIMS:

Claims 1.-13. (Canceled)

14. (Original) Apparatus, comprising:

means for providing successive mixed optical images of an object space in an image space for presentation to a viewer's eye, each mixed optical image having a highly detailed component and a lesser detailed component, the successive mixed images for simulating percepts of optical images of the object space cast on a simulated eye's retina; and

means for changing the image content of selected successive mixed images according to changes in the direction of the simulated eye's visual axis in the object space such that the relative direction of the visual axis of the viewer's eye with respect to the image space may analogously and passively follow the relative direction of the simulated eye's visual axis with respect to the object space by following the highly detailed component of the successive mixed optical images presented thereto such that the highly detailed component may be cast on the fovea of the retina of the viewer's eye and the lesser detailed component may be cast on at least the remainder of the retina of the viewer's eye for stimulating the viewer to experience percepts corresponding to the simulated percepts.

15. (Canceled)

16. (Original) The apparatus of claim 14, wherein the image information in the detailed component is encoded as a plurality of closely spaced mosaic elements for presentation surrounded by the image information in the lesser detailed component encoded as a plurality of more widely spaced mosaic elements.

Claims 17.-18. (Canceled)

19. (Original) The apparatus of claim 14, wherein the highly detailed component is mobile with respect to the lesser detailed component to simulate

movement of the simulated eye with respect to the simulated eye's orbit, the lesser detailed component encompassing a field of view which changes to simulate movement of the orbit's head with respect to the object space.

Claims 20.-21. (Canceled)

22. (Original) The apparatus of claim 14, further comprising:

means for providing additional successive mixed optical images of the object space in the image space for presentation to the viewer's remaining eye, each additional mixed optical image having a highly detailed component and a lesser detailed component, the additional successive mixed optical images for simulating additional percepts of optical images of the object space from a different perspective cast on an additional simulated eye's retina; and

means for changing the image content of selected additional successive mixed images according to changes in the direction of the additional simulated eye's visual axis in the object space such that the relative direction of the visual axis of the viewer's remaining eye with respect to the image space may analogously follow the relative direction of the additional simulated eye's visual axis with respect to the object space by following the highly detailed component of the additional successive mixed optical images presented thereto such that the highly detailed component may be cast on the fovea of the retina of the viewer's remaining eye for stimulating the viewer to experience additional percepts corresponding to the additional simulated percepts.

Claims 23.-24. (Canceled)

25. (Original) The apparatus of claim 22, wherein the successive mixed optical images are provided from one image source for presentation to the viewer's eye and wherein the additional successive mixed optical images are provided from another image source for presentation to the viewer's remaining eye.

26. (Original) The apparatus of claim 22, wherein the successive mixed optical images and the additional successive mixed optical images are provided from a single image source and wherein the successive mixed optical images are for presentation to the viewer's eye and wherein the additional successive mixed optical images are for presentation to the viewer's remaining eye.

Claims 27-37 (Canceled)

38. (Previously Presented) The apparatus of claim 14, wherein said highly detailed component and said lesser detailed component are each made of pixels wherein pixels associated with said highly detailed component are individually controlled for luminance while pixels associated with said lesser detailed component are grouped together for luminance control.

39. (Previously Presented) The apparatus of claim 38, wherein said lesser detailed component comprises a plurality of squares of pixels, the pixels of each square controlled together at a same luminance.

40. (Previously Presented) The apparatus of claim 39, wherein said highly detailed component comprises a plurality of pixels forming a high resolution square wherein said pixels in said high resolution square are controllable individually for luminance.

Claims 41.-43. (Canceled)

44. (New) Display apparatus, comprising:  
a display surface, responsive to a decoded mixed image signal, for providing successive mixed optical images of an object space in an image space for presentation to a viewer's eye, each mixed optical image having a highly detailed component and a lesser detailed component, the successive mixed images for simulating percepts of optical images of the object space cast on a simulated eye's retina; and

a decoder, responsive to an encoded mixed image electrical signal, for providing said decoded mixed image signal for changing the image content of selected successive mixed images according to changes in the direction of the simulated eye's visual axis in the object space such that the relative direction of the visual axis of the viewer's eye with respect to the image space analogously and passively follows the relative direction of the simulated eye's visual axis with respect to the object space by following the highly detailed component of the successive mixed optical images presented thereto such that the highly detailed component is cast on the fovea of the retina of the viewer's eye and the lesser detailed component is cast on at least the remainder of the retina of the viewer's eye for stimulating the viewer to experience percepts corresponding to the simulated percepts.

45. (New) The display apparatus of claim 14, wherein the image information in the detailed component is encoded as a plurality of closely spaced mosaic elements for presentation surrounded by the image information in the lesser detailed component encoded as a plurality of more widely spaced mosaic elements.

46. (New) The display apparatus of claim 14, wherein the highly detailed component is mobile with respect to the lesser detailed component to simulate movement of the simulated eye with respect to the simulated eye's orbit, the lesser detailed component encompassing a field of view which changes to simulate movement of the orbit's head with respect to the object space.

47. (New) The display apparatus of claim 44, wherein said highly detailed component and said lesser detailed component are each made of pixels wherein pixels associated with said highly detailed component are individually controlled for luminance while pixels associated with said lesser detailed component are grouped together for luminance control.

48. (New) The apparatus of claim 47, wherein said lesser detailed component comprises a plurality of squares of pixels, the pixels of each square controlled together at a same luminance.

49. (New) The apparatus of claim 48, wherein said highly detailed component comprises a plurality of pixels forming a high resolution square wherein said pixels in said high resolution square are controllable individually for luminance.

50. (New) Camera apparatus, comprising:

a converter, responsive to a mixed image light signal, for providing a mixed image electrical signal for providing successive mixed optical images of an object space in an image space for presentation to a viewer's eye, each mixed optical image having a highly detailed component and a lesser detailed component, the successive mixed images for simulating percepts of optical images of the object space cast on a simulated eye's retina; and

a nonuniform resolution optical conversion device, responsive to a light image signal, for providing said mixed image light signal for changing the image content of selected successive mixed images according to changes in the direction of the simulated eye's visual axis in the object space such that the relative direction of the visual axis of the viewer's eye with respect to the image space analogously and passively follows the relative direction of the simulated eye's visual axis with respect to the object space by following the highly detailed component of the successive mixed optical images presented thereto such that the highly detailed component is cast on the fovea of the retina of the viewer's eye and the lesser detailed component is cast on at least the remainder of the retina of the viewer's eye for stimulating the viewer to experience percepts corresponding to the simulated percepts.

51. (New) The camera apparatus of claim 50, wherein the image information in the detailed component is encoded as a plurality of closely spaced mosaic elements for presentation surrounded by the image information in the lesser detailed component encoded as a plurality of more widely spaced mosaic elements.

52. (New) The camera apparatus of claim 50, wherein the highly detailed component is mobile with respect to the lesser detailed component to simulate movement of the simulated eye with respect to the simulated eye's orbit, the lesser detailed component encompassing a field of view which changes to simulate movement of the orbit's head with respect to the object space.

53. (New) The camera apparatus of claim 50, wherein said highly detailed component and said lesser detailed component are each made of pixels wherein pixels associated with said highly detailed component are individually controlled for luminance while pixels associated with said lesser detailed component are grouped together for luminance control.

54. (New) The camera apparatus of claim 53, wherein said lesser detailed component comprises a plurality of squares of pixels, the pixels of each square controlled together at a same luminance.

55. (New) The camera apparatus of claim 54, wherein said highly detailed component comprises a plurality of pixels forming a high resolution square wherein said pixels in said high resolution square are controllable individually for luminance.

56. (New) Camera apparatus, comprising:  
a uniform resolution optical conversion device, responsive to light in an object space, for providing a uniform light image signal; and  
a converter, responsive to the light image signal in the object space, for providing a mixed image electrical signal for providing successive mixed optical images of an object space in an image space for presentation to a viewer's eye, each mixed optical image having a highly detailed component and a lesser detailed component, the successive mixed images for simulating percepts of optical images of the object space cast on a simulated eye's retina, wherein said converter is  
for changing the image content of selected successive mixed images according to changes in the direction of the simulated eye's visual axis in the object

space such that the relative direction of the visual axis of the viewer's eye with respect to the image space analogously and passively follows the relative direction of the simulated eye's visual axis with respect to the object space by following the highly detailed component of the successive mixed optical images presented thereto such that the highly detailed component is cast on the fovea of the retina of the viewer's eye and the lesser detailed component is cast on at least the remainder of the retina of the viewer's eye for stimulating the viewer to experience percepts corresponding to the simulated percepts.

57. (New) The apparatus of claim 56, wherein the image information in the detailed component is encoded as a plurality of closely spaced mosaic elements for presentation surrounded by the image information in the lesser detailed component encoded as a plurality of more widely spaced mosaic elements.

58. (New) The apparatus of claim 56, wherein the highly detailed component is mobile with respect to the lesser detailed component to simulate movement of the simulated eye with respect to the simulated eye's orbit, the lesser detailed component encompassing a field of view which changes to simulate movement of the orbit's head with respect to the object space.

59. (New) The apparatus of claim 56, wherein said highly detailed component and said lesser detailed component are each made of pixels wherein pixels associated with said highly detailed component are individually controlled for luminance while pixels associated with said lesser detailed component are grouped together for luminance control.

60. (New) The apparatus of claim 59, wherein said lesser detailed component comprises a plurality of squares of pixels, the pixels of each square controlled together at a same luminance.

61. (New) The apparatus of claim 60, wherein said highly detailed component comprises a plurality of pixels forming a high resolution square wherein said pixels in said high resolution square are controllable individually for luminance.